## REMARKS

Claims 1-3, 5-16, 34, and 37-41 are currently pending in the subject application and are presently under consideration. Claims 1, 6 and 37 have been currently amended while claim 36 is canceled as shown on pages 2-6 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I.     **Rejection of Claims 1-3, 5-7, 11, 13, 34, and 36-41 Under 35 U.S.C. §103(a)**

Claims 1-3, 5-7, 11, 13, 34, and 36-41 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Knight *et al.* (US 6,493,703), in view of Williams *et al.* (US 2004/0210550), in view of Holtzman (US 7,185,065), in further view of Bates *et al.* (US 6,963,902), and in further view of Presnell *et al.* (US 6,182,067). This rejection should be withdrawn for at least the following reasons. None of the cited documents, alone or in combination teach or suggest all aspects of the subject claims.

The claimed subject matter generally relates to electronic data searches and more particularly to employing relevance function(s) to rank search results obtained from digital artifacts such as Usenet, a discussion thread, a blog, an archived community discussion, or a chat room. To this end, independent claim 1 recites: *a function generator component that generates the relevance functions such that search results are ordered based on their respective relevances,* **the search is selectively scoped based at least on a structure of the thread comprising the one or more messages wherein at least one of the features is based on inferred labels on edges between a message in the thread and one or more of a parent or child of the message wherein the labels determine nature of a respective message with respect to the thread and are automatically derived from content of the one or more messages within the thread.** Similarly independent claim 37 recites: *means for generating the relevance functions that facilitate ordering the search results based on their respective relevances wherein* **the search has variable scope based at least on a structure of the thread comprising the one or more messages comprising at least a message core with text of a single message within the thread and a message body including text of a plurality of messages structurally related to the single message within the thread, at least one of the features is based on labels on edges between a message in the thread and one or more of a parent or child of the message wherein**

*the labels are automatically derived from content of the one or more messages within the thread.* Knight *et al.*, Williams *et al.*, Holtzman, Bates *et al.*, and Presnell *et al.*, alone or in combination, fail to teach or suggest such claimed aspects.

Williams, *et al.* relates to facilitating a self organizing workforce of one or more workers through payment and recognition incentives, a set of configurable operating rules and a set of credentials to represent the reputations and organizational capital of individual workers. It also discloses a message board format to facilitate count of votes post credit, agreement or disagreement, named or anonymous posters and combining them with message board attributes such as thread depth etc. and semantic analysis techniques to extract concepts (*See* Williams, *et al.* paragraph [0102]). In this context, although Williams, *et al.* teaches using thread properties such as thread depth with semantic analysis to extract concepts, it fails to teach or suggest scoping a search of a discussion board comprising messages based on a structure of the thread as recited in the subject claims.

Knight, *et al.* relates to monitoring that subscriber tastes and interests of online message board systems so that relevant content can be located extracted and presented in accordance with subscriber derived feedback information. Accordingly Knight, *et al.* teaches performing queries on pre-defined logical groupings of subject matter already constructed for users' convenience (*See* Knight, *et al.* col.15 lines 53-55) it fails to teach or suggest scoping a search based on a message structure. On page 6 of the subject Final Office Action it is erroneously contended that Knight, *et al.* teaches inferring labels that determine nature of a message within a thread and employing such labels for inferring relevance of the message to a search. At the cited portion, Knight, *et al.* merely discloses that when a user replies to a message, a message entry is sent from the user's computer system to the server where it is posted by posting logic to an appropriate subject matter area/class/subclass index based on both the content and context of the message entry. Specifically, the reply is tagged with a parameter field specifying that the reply posting should also be classified in the same area as the original posting. However, nowhere does Knight, *et al.* teach or suggest that existing messages are tagged or that the parameter field used for tagging incoming replies is automatically derived based on message content. Nor does Knight, *et al.* disclose that the parameter field determines nature of the message with respect to the thread. The claimed subject matter relates to inferring labels from existing messages in a thread on edges between a posting and its parent/child. These labels are automatically derived

from the message content determine nature of the message with respect to the thread (*e.g.*, clarification, response, topic shift, etc). (*See* applicants' specification as filed page 16 lines 22-27).

Additionally, it is also erroneously contended on page 6 of the subject Final Office Action that Knight, *et al.* teaches features which utilize occurrence of a word/pharse or word class in position within a thread relative to a posting to determine relevance of the posting as recited in dependent claim 34. At the cited portion, Knight, *et al.* teaches categorizing postings by tagging each posting with parameter fields specifying categories which such posting should fall under. However, such is not the same as examining a thread for specific words/phrases and if the words are found, determining relevance of postings based on the position of such words/phrases with respect to those postings. For example, if a string "thank you" appears in a child posting of posting P, that likely increases the probability that P is a quality posting. None of the cited documents teach or suggest such aspects.

Holtzman, *et al.* relates to collecting and analyzing electronic discussion messages to categorize the message communications in order to identify trends and patterns in pre-determined markets. Accordingly, electronic messages and collected and analyzed in accordance with characteristics and data inherent in the messages. However, nowhere does Holtzman, *et al.* teach or suggest an analysis such that a search is scoped in accordance with a message structure as recited in the subject claims.

Bates, *et al.* relates to selectively displaying messages to a user. Based on the time of viewing a message and statistics on how many times a message is skipped, time scores and skip scores are calculated. When a user requests to view messages, they are displayed based on their respective time/skip scores in order to omit those with minimum time scores/maximum skip scores. However, Bates, *et al.* also fails to teach or suggest scoping search for messages based on a structure of the message as recited in the subject claims.

It is conceded on page 4 of the subject Final Office Action that a combination of Knight *et al.*, Williams *et al.*, Holtzman, and Bates *et al.*, fails to teach or suggest the aforementioned aspects of independent claims 1, 37. Presnell *et al.* is cited to overcome this deficiency. It relates to knowledge management techniques wherein usage information relating to each document in the database is accumulated and a usage score is determined based on that information. A relevance value is assigned is assigned to each of the document which is then

used to sort the documents and a list is presented to the user. Preferably, knowledge related concepts are defined and a profile representing a knowledge requirement of the user is established. A profile score may then be calculated and included in the relevance value. A user score, based on a subjective assessment of the document, may also be included in the relevance value. At the cited portions, Presnell *et al.* teaches search for terms at specific locations within documents such as title, abstract, body etc. However, this is not the same as scoping search over a message thread comprising one or more messages as messages within a discussion thread are not clearly formatted in the same manner as other documents. Web pages, which are normally retrieved by search engines such as those disclosed by Presnell *et al.* facilitate searching via rich markup that is comprised within them. For example, a title or body of a web page would clearly be placed appropriately within <TITLE> </TITLE> or <BODY> </BODY> tags. This facilitates search engines to identify specific locations within the HTML document to search. However, discussion threads within Usenet or chat rooms do not have such clearly formatted structure. Therefore, the claimed subject matter provides a structure for a discussion thread and flexibly scoping a search over such structure. For example, independent claim 37 and similarly dependent claim 42 provide for a thread structure comprising a message core with text of a single message and a message body including text of a plurality of messages structurally related to the single message. When searching this posted message, the message can be scoped at the root, body, core and/or child level. (*See* applicants' specification as filed page 14 Document search example).

In view of at least the foregoing, it is clear that none of the cited documents teach or suggest all aspects of the subject claims. Hence, this rejection should be withdrawn.

## II.    Rejection of Claims 8-9 and 12 Under 35 U.S.C. §103(a)

Claims 8-9 and 12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Knight *et al.* (US 6,493,703), Williams *et al.* (US 2004/0210550), Holtzman (US 7,185,065), Bates *et al.* (US 6,963,902), and Presnell *et al.* (US 6,182,067), and in further view of Official Notice. Withdrawal of this rejection is requested for at least the following reasons. As discussed *supra*, Knight, *et al.* Williams, *et al.*, Holtzman, *et al.*, and Bates, *et al.* do not teach or suggest all the claim features with respect to amended independent claim 1 (which claims 8, 9 and 12 depend from). Examiner's Official Notice does not make up for the aforementioned

deficiencies of the cited references. In view of at least the foregoing, it is clear that none of the cited documents and Official Notice teach or suggest all aspects of the subject claims. Hence, this rejection should be withdrawn.

III.     **Rejection of Claims 10 and 14-16 Under 35 U.S.C. §103(a)**

Claims 10 and 14-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Knight *et al.* (US 6,493,703), Williams *et al.* (US 2004/0210550), Holtzman (US 7,185,065), Bates *et al.* (US 6,963,902), and Presnell *et al.* (US 6,182,067), and in further view of Vanderveldt *et al.* (US 6,266,668). As discussed *supra*, Knight, *et al.* Williams, *et al.*, Holtzman, *et al.*, and Bates, *et al.* do not teach or suggest all the claim features with respect to amended independent claim 1 (which claims 10 and 14-16 depend from). Vanderveldt, *et al.* relates to a method of data mining wherein a search profile is created to determine topics of interest. These topics are output to a search specific tool that match the topics to web sites which are filtered to determine if they contain the relevant information before being presented to the user. However, it does not make up for the aforementioned deficiencies of the cited references as it fails to teach or suggest scoping searches of discussion threads based on a structure of one or more messages being search. In view of at least the foregoing, it is clear that none of the cited documents teach or suggest all aspects of the subject claims. Hence, this rejection should be withdrawn.

## CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments.  A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP594US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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